

WHAT IS CLAIMED IS:

1. A print control apparatus that controls a printing unit, which applies multiple color inks on a printing medium to print a color image, said print control apparatus comprising:

an image data input module that receives an input of color image data;

a hue storage module that stores in advance a predetermined range of hues for which saturation is to be enhanced;

a saturation enhancement module that enhances saturation of the input color image data in the predetermined range of hues;

an ink application density specification module that specifies an application density of ink to be applied on the printing medium with regard to each of the multiple color inks, based on the color image data with the enhanced saturation in the predetermined range of hues; and

a control signal output module that outputs the specified application density of each color ink as a control signal to said printing unit.

2. A print control apparatus in accordance with claim 1, wherein said hue storage module stores hues of blue to green as the predetermined range of hues.

3. A print control apparatus in accordance with claim 1, said print control apparatus further comprising:

an expression format conversion module that converts

the color image data into data of another expression format using saturation, hue, and lightness,

wherein said saturation enhancement module receives the data converted to the another expression format and
5 changes data representing the saturation in the predetermined range of hues to data representing higher saturation.

4. A print control apparatus in accordance with claim
10 1, wherein said saturation enhancement module enhances the saturation by a greater degree with an increase in saturation of the color image data in the predetermined range of hues.

5. A print control apparatus in accordance with claim
15 1, wherein said saturation enhancement module comprises:
an image data conversion module that converts the color image data into a wide gamut color image data that is capable of expressing higher saturation than saturation expressible by the color image data,

20 said saturation enhancement module enhancing the saturation after the conversion of the input color image data into the wide gamut color image data.

6. A print control apparatus in accordance with claim
25 1, wherein said saturation enhancement module comprises:
an enhancement degree storage module that stores in advance a plurality of different degrees of enhancement for saturation of the color image data; and

an enhancement degree selection module that selects
30 one enhancement degree among the plurality of different

enhancement degrees stored,

said saturation enhancement module enhancing the saturation of the color image data according to the selected enhancement degree.

5

7. A print control apparatus in accordance with claim 1, said print control apparatus comprising:

an enhancement execution setting module that sets in advance execution or non-execution of enhancement for the saturation of the color image data; and

10

a saturation enhancement prohibition module that prohibits said saturation enhancement module from enhancing the saturation and supplies the color image data received by said image data input module to said ink application density specification module, when the setting represents non-execution of enhancement for the saturation of the color image data,

15

wherein said ink application density specification module specifies the application density of each color ink, based on the supplied color image data.

20

8. A print control apparatus that controls a printing unit, which applies multiple color inks on a printing medium to print a color image, said print control apparatus comprising:

25

a conversion table that stores a mapping of color image data to converted image data, which is obtained through predetermined data conversion of the color image data;

an image data input module that receives an input of color image data;

30

an image data conversion module that refers to the conversion table and converts the input color image data into the converted image data;

an ink application density specification module that
5 specifies an application density of ink to be applied on the printing medium with regard to each of the multiple color inks, based on the color image data with the enhanced saturation in the predetermined range of hues; and

a control signal output module that outputs the
10 specified application density of each color ink as a control signal to said printing unit,

wherein the conversion table stores the image data with the enhanced saturation in the predetermined range of hues as the converted image data.

15

9. A print control apparatus in accordance with claim 8, wherein the conversion table stores a mapping of color image data in a first color system to color image data in a second color system.

20

10. A printing apparatus that applies multiple color inks on a printing medium to print a color image, said printing apparatus comprising:

a printing unit that applies the multiple color inks
25 on the printing medium;

an image data input module that receives an input of color image data;

a hue storage module that stores in advance a predetermined range of hues for which saturation is to be
30 enhanced;

0977063-022502

a saturation enhancement module that enhances saturation of the input color image data in the predetermined range of hues;

an ink application density specification module that
5 specifies an application density of ink to be applied on the printing medium with regard to each of the multiple color inks, based on the color image data with the enhanced saturation in the predetermined range of hues; and

10 a control signal output module that outputs the specified application density of each color ink as a control signal to said printing unit.

11. A print control method of controlling a printing unit, which applies multiple color inks on a printing medium
15 to print a color image, said print control method comprising the steps of:

storing a predetermined range of hues for which saturation is to be enhanced;

20 receiving an input of color image data and enhancing saturation of the color image data in the predetermined range of hues;

specifying an application density of ink to be applied on the printing medium with regard to each of the multiple color inks, based on the color image data with the enhanced
25 saturation in the predetermined range of hues; and

outputting the specified application density of each color ink as a control signal to said printing unit.

12. A print control method in accordance with claim
30 11, wherein the saturation in the predetermined range of

hues is enhanced after conversion of the input color image data into a data format that is capable of expressing higher saturation than saturation expressible by the input color image data.

5

13. A computer program product that actualizes a print control method of controlling a printing unit, which applies multiple color inks on a printing medium to print a color image, said computer program product comprising:

10 a recording medium in which data is recorded in a computer readable manner; and

a computer program recorded in said recording medium, wherein said computer program comprising the program codes of:

15 storing a predetermined range of hues for which saturation of a color image is to be enhanced;

receiving an input of color image data and converting the input color image data, so as to enhance saturation of the color image data in the predetermined range of hues;

20 specifying an application density of ink to be applied on the printing medium with regard to each of the multiple color inks, based on the color image data with the enhanced saturation in the predetermined range of hues; and

outputting the specified application density of each color ink as a control signal to said printing unit.

25

14. A program that causes a computer to attain a print control method of controlling a printing unit, which applies multiple color inks on a printing medium to print a color image, said program comprising the program codes of:

30

00977063-0225012

storing a predetermined range of hues for which saturation of a color image is to be enhanced;

receiving an input of color image data and converting the input color image data, so as to enhance saturation

5 of the color image data in the predetermined range of hues;

specifying an application density of ink to be applied on the printing medium with regard to each of the multiple color inks, based on the color image data with the enhanced saturation in the predetermined range of hues; and

10 outputting the specified application density of each color ink as a control signal to said printing unit.

15 15. An image processing apparatus that receives an input of color image data, makes the input color image data subject to a predetermined series of image processing, and outputs the processed color image data to outside to print a resulting image, said image processing apparatus comprising:

20 an image data input module that receives the input of the color image data;

a hue storage module that stores in advance a specified hue for which saturation is to be enhanced;

25 a saturation enhancement module that enhances saturation of the specific hue of the color image data according to a difference between saturation expressible by the color image data and saturation printable with a color printer, which prints color images, with regard to the specific hue; and

30 an image data output module that outputs the color image data with the enhanced saturation.